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ABSTRACT

This paper reviews the development of a curriculum assessment plan by the Business and Management Division of Cardinal Stritch College in Milwaukee, Wisconsin, and reports the results of a study to determine the effectiveness of the plan. The division, which delivers accelerated instruction in evening courses, used the comprehensive outcomes assessment program (COAP) and the core curriculum assessment program (CCAP) to evaluate the division's programs and student achievement. The division used the COAP and CCAP measures to compare the pre- and post-test scores of 78 students who have completed the Bachelor of Science in Business Management program and 41 students who have completed the Master of Science in Management program. It also used the measures to assess the pre-test scores of 67 students who did not complete these programs. The study found that students who completed the Bachelor's or Master's programs exhibited a significant increase in business management skills. It also found that students who did not complete the Bachelor's program had significantly higher pre-test scores than students who received their degree, while students who did not complete the Master's program had lower pre-test scores than those who did. (MDM)

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Core Curriculum Assessment Program: A Case Study

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Abstract

The Core Curriculum Assessment Program (CCAP) was developed by the American College Testing (ACT) program for the American Assembly of Collegiate Schools of Business (AACSB). The test evaluates student achievement and curriculum standards in seven disciplinary areas within the business environment. The test bank of more than 800 questions was used as a major component in a comprehensive outcomes assessment program for the business and management division. This paper will address the assessment process, development, methodology, and results of the CCAP for a nontraditional business program. Pre- and post-test scores are compared between groups, as well as test scores of individual students, to analyze the validity of the CCAP.

Overview

Cardinal Stritch College is an independent Catholic institution of post-secondary education, sponsored by the Sisters of St. Francis of Assisi. The College, rooted in the liberal arts, provides graduate and undergraduate programs to prepare students for life and for professional careers. The College assists women and men in pursuing lifelong learning. It provides both traditional and non-traditional approaches to meet the educational needs of a diverse student body. There are three main divisions within the institution: Liberal Arts, Teacher Education, and Business and Management Division. The College had been involved in assessment and cyclical-self assessment since 1991 but its nontraditional programs presented several unique circumstances to be addressed.

The Business and Management Division of the College consists of six different majors for the working-adult students at the associate, bachelor, and graduate level. Classes are held one night a week from 6:00 pm to 10:00 pm and are delivered in an accelerated format. Enrollment is limited to twenty-two students per class and are started approximately every month depending on the number of individuals registered. There are no traditional semester starts and while this accelerates all aspects of the program delivery it also creates various advantages. These are lock-step programs where students enter and complete courses in specified sequences with the same cluster of students.

Cardinal Stritch College's Assessment Plan was developed through the efforts of many members of the College community. Committed to College-wide institutional effectiveness, every effort was made to provide information to students, faculty, and staff as to the importance of developing such a plan.

The following principles guided the College in developing the plan:

1. that the mission of the College be reflected in the formulation of the plan and the utilization of results;
2. that the plan be comprehensive in focus to include the entire institution;
3. that the plan have institutional support by hiring a Director of Institutional Research. This individual would be responsible for coordinating the assessment activities and serve as a member of the Assessment Committee;
4. that the plan be cost-effective and utilize already established measures of assessment;
5. that communication systems utilizing current College structures be established by which students receive information regarding the assessment initiatives and their purpose, and that College-wide presentations be made on the plans for assessing institutional effectiveness;
6. that multiple measures be selected through consultation and recommendation of representatives from the faculty and administration;
7. that a faculty committee including professional staff members from the academic area be established to review results, analyze data, refine assessment processes and recommend change;
8. that systems be designed to provide feedback on results to the College constituencies;

As it relates to Assessment of Student Achievement:

9. that students be assessed at multiple points during their educational experience;
10. that the assessment of student achievement lead to the improvement of the educational experience of CSC students;
11. that the plan employ a variety of methods of measurement of student achievement, including both quantitative and qualitative measures;
12. that the plan be linked to the College educational experience outcomes, general educational outcomes, academic program outcomes and individual course outcomes;
13. that faculty review results and make decisions regarding program improvement.

The principles that guided the formulation of Cardinal Stritch College's Plan for Institutional Assessment have been realized.

The Mission of Cardinal Stritch College states that it:

- prepares students for life and for professional careers;
- meets the educational needs of a diverse student body;
- addresses the emerging needs of students;
- provides direct service to people who might not otherwise be served; and
- fosters the moral, spiritual, social and physical development of each person.

Based on these mission statements, the institution designed an assessment process that examined the College against its mission and institutional goals.

The Comprehensive Outcomes Assessment Program (COAP) was designed to provide a system of continuous evaluation of the Business and Management Division of the College. A multiplicity of assessment instruments were either purchased, developed, or devised to review the cognitive areas of the various different majors, as well as the liberal arts component, and affective elements. Pre- and post-testing was an important aspect of COAP. Both surveys and cognitive testing were utilized, as well as norm-referenced and criterion-referenced testing.

Three main points were considered essential within the development process. The assessment instruments had to address the mission of the College, they had to be comprehensive, and the process was to be well-established so it would operate in a Total Quality Management mode, applying concepts of control, quality process, and customers to management, e.g. continuous improvement.

The Core Curriculum Assessment Program (CCAP) was developed by the American Assembly of Collegiate Schools of Business Programs (AACSBP) to evaluate student achievement in seven disciplinary areas within the business environment. For the

major field of study in the nontraditional Business and Management Division, the AACSBP CCAP was selected because it was cost-effective, it provided a great deal of flexibility--it was adjusted for the six different majors in the division, and it was criterion-referenced. The test bank of more than 800 questions was used as a major component in a comprehensive assessment program for a business program. The assessment process, development, methodology, and results of the CCAP for a nontraditional program provided the basis for the research in this paper.

The following table outlines the Comprehensive Outcomes Assessment Program:

Associate Bachelor Pre-assessment Night	Associate Bachelor Post-assessment Night	Graduate Level Pre-assessment Night	Graduate Level Post-assessment Night
New Student Reply Form	Student Opinion Survey	New Student Reply Form	Student Opinion Survey
Attitudinal Survey	Attitudinal Survey	Attitudinal Survey	Attitudinal Survey
ACT ASSET Test: B	ACT ASSET Test: C1	AACSB CCAP (90 min)	AACSB CCAP (90 min)
AACSB CCAP (90 min)	AACSB CCAP (90 min)	Major Field Assessment	Major Field Assessment
Major Field Assessment	Major Field Assessment		

The information collected was used for assessment purposes and program evaluation only. All data were held in confidence and only group data are reported. Completion of the assessment program is required of all students but there are no pass or fail "grades" distributed. In other words, students must only complete the assigned instruments to graduate from the college, they do not have to attain a certain level, or score, to graduate.

The Comprehensive Outcomes Assessment Plan was organized so that the results were used to enhance the quality of the program, while the process itself was reviewed and updated to increase the efficiency and effectiveness of the institution. The

assessment plan was implemented into a purposeful program that was institution-wide, while the assessment helped shape institutional priorities.

Goal of the study

The purpose of this study is two-fold. One purpose is to identify differences between pre-test and post-test scores of students who have completed the curriculum. The second purpose is to see if there are differences between pre-test scores of those completing the program and those not completing the program. For purposes of this paper, these groups will be called "Survivors" and "Non-survivors."

After considerable research, the analysis focused on students in two business programs: undergraduate students in the Bachelor of Science in Management (BSM) and graduate students in the Master of Science in Management (MSM) programs.

The first and last night of the programs are reserved for outcomes assessment activities, including administering the CCAP. As a result, pre-and post-test scores may be matched to individuals who completed (Survivors) as well as defining those who did not complete (Non-survivors). A series of matched pairs t-tests was run as were independent sample t-tests.

Background

This study had its origin in an initial comparison of pre-test with post-test scores of one of the programs. Because data had been gathered in groups of students with the initiation of the assessment program, groups of pre-test data and post-test data were generated as students started and completed the programs. As expected, post-test scores were, in the aggregate, higher than pre-test scores. Two concerns immediately presented themselves. The first concern was that the initial observations were not of matched pairs.

that is the pre- and post-test pairs did not usually involve the same individuals, or in most cases even the same groups of individuals. This made it impossible to perform dependent sample (or matched pairs) t-tests for the effectiveness of the curriculum until very recently. The second issue was whether or not improvement in pre- and post-test scores was based on improvement in skills due to learning from the curriculum, or whether the improvement in scores was due to another factor. Specifically, at issue was whether Survivors entered the program with a higher level of innate ability as tested by the assessment program than Non-survivors. This second question could be phrased "did Survivors come from the higher end of the curve in the first place, and is that why the post-test results were, in the aggregate, higher than pre-test results?" Put another way, one might ask "Is there as selection process going on which is based on something other than cognitive ability?"

Results

The first question was answered by a series of matched pair t-tests. Table 1 indicates that the mean differences between pre- and post-test scores were significant at the 0.000 level for BSM students and at the 0.019 level for MSM students.

These results suggest that, for these groups of students, significant increases in skills as measured by the CCAP were observed.

Table 1: Matched pair comparison of pre- and post test results for BSM and MSM students

BSM students

Variable	Number of Pairs	Mean	SD	S.E. of Mean	t-value	sig. p.
Pre-test score		33.64	6.39	0.659		
Post-test score		37.80	5.82	0.724		
Paired Differences	78	4.16	5.80	0.657	6.62	0.000

MSM students

Variable	Number of Pairs	Mean	SD	S.E. of Mean	t-value	sig. p.
Pre-test score		37.41	5.47	0.877		
Post-test score		40.07	5.61	0.854		
Paired Differences	41	2.66	6.96	1.087	2.45	0.019

The second part of this study was the more difficult to analyze. The data took considerable evaluation to determine which students were not included in the groups of Survivors or Non-survivors. Specifically, it was relatively straightforward to determine which groups of students had taken the pre-test, but determining which individual students had not taken the post-test and for what particular reasons was more difficult. More to the point, determining which students had completed the program but had not taken the post-test, albeit perhaps for perfectly legitimate reasons, was a labor-intensive task.

Table 2 indicates that the difference between pre-test scores for Survivors and comparable Non-survivors for Bachelor level students is significant at the 0.064 level. Non-survivors had a significantly higher mean pre-test score than Survivors, and the dispersion for Non-survivors was greater. Table 2 further shows that for Masters level

students in the MSM program the opposite is the case: Survivors had a higher pre-test score than Non-survivors, significant at the 0.070 level.

Table 2. Independent sample comparison of Pre-test scores for Survivors and Non-survivors of BSM and MSM Students

BSM students					
Population	Number of Cases	Mean	SD	t-value	sig. p.
Survivors	78	33.6	6.39		
Non-survivors	48	36.1	8.01		
				-1.87	0.064
MSM students					
Population	Number of Cases	Mean	SD	t-value	sig. p.
Survivors	41	37.41	5.61		
Non-survivors	19	34.42	6.30		
				1.85	0.070

This suggests that, for Bachelor-level students, there are measurable differences between Survivors and Non-survivors in skills when entering the program. The fact that Non-survivors have a higher mean test score than Survivors suggests the possibility that, at this level, as much as mastering cognitive skills students are going through a selection process. In other words, not only are they being taught, they are being sorted on the basis of the ability to stay in the program, perhaps on the basis of perseverance. As William Disbro wrote, "One of the first things a college degree says about you is that you can survive."

Masters level students present a very different picture. MSM Survivors are entering the program with somewhat higher skills than Non-Survivors. Arguably, the

Survivors are being drawn from the high end of the curve, and are selecting themselves on the basis of enhancing a body of knowledge, rather than teaching new skills.*

What are we to make of these conflicting results? These results imply that at the undergraduate level considerable growth is achieved by students who are willing to stick it out. Since undergraduate Non-survivors have a higher mean than Survivors, it appears that this is a test of perseverance more than academics. By virtue of their higher pre-test score, we know that the Non-survivors have the cognitive ability to complete this program. Graduate school, by its more demanding nature, may require more cognitive skill to begin with. Thus, the higher pre-test scores for Survivors indicate that sorting out of students is based on academics. The writers will admit that this result was unexpected. In fact, these preliminary findings have caused some excitement, and provided fertile ground for more study as more data are sifted through. Attention may also turn to a study of whether undergraduate Non-survivors go on to continue their education at a school that they may find more challenging. In short, as is so often the case, this study has raised more questions than it has answered.

However, one of the main goals of the assessment program was to evaluate the curriculum and students in the Business and Management Division. One of the results of this study was to see the CCAP in a different light. The CCAP has provided more information regarding the academic effectiveness of the program which should lead to continuous quality improvement.

* The relatively low number of Non-survivors in the MSM program (19) suggest caution should be used in interpreting this result. Nonetheless, the variances are relatively close, suggesting that this finding will become more robust as more data become available, and consequently should not unduly worry us.

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